

Picture quiz – Answers

1. Plasmodium vivax malaria.

Note the enlarged parasitized red cell. Pancytopenia is a common presentation in malaria. A high degree of suspicion is required in patients returning from countries where malaria is endemic.

2. Southeast Asian Hereditary Ovalocytosis (SEAHO)

There are multiple cross striations and French loaf like cross bars seen across the red cells. This is an autosomal dominant inherited haemolytic anaemia. Those with heterozygous inheritance have a mild anaemia with typical morphological features of red cells. Homozygous inheritance is fatal.

3. Acute leukaemia

Blood picture shows nucleated red cells and occasional blast cells suggestive of acute leukaemia. Confirmation requires further investigations; flowcytometry, cytogenetics and bone marrow biopsy.

4. Acute intravascular haemolysis due to oxidant mediated haemolysis.

This patient had consumed “kuppa meniya” as a sambol which is a well-known precipitant of haemolysis in those with G6PD deficiency. Note the numerous bite cells, blister cells and larger and darker than normal polychromatic cells in the blood picture.

5. Extensive secondary deposits of a malignant tumour in the bone marrow inciting a desmoplastic reaction.

Tumour cells are seen within the bone marrow sinusoids. Normal haemopoiesis is virtually absent. Most likely primary sites are prostate, colon, ovary, lung, thyroid

These are differentiated by specific tumour markers and immunohistochemistry.